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10/574,063	11/10/2006	Geertruida Lotte Alida Boterkooper	0470-060991	9778

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EXAMINER
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BEKKER, KELLY JO

ART UNIT	PAPER NUMBER
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1794

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/574,063	<b>Applicant(s)</b> BOTERKOOPE ET AL.	
	<b>Examiner</b> KELLY BEKKER	<b>Art Unit</b> 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12 January 2010.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 45-82 is/are pending in the application.
- 4a) Of the above claim(s) 76-82 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 45-75 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)         | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

**DETAILED ACTION**  
***Election/Restrictions***

Applicant's election with traverse of Groups I, II, and III in the reply filed on January 12, 2010 is acknowledged. The traversal is on the ground(s) that the search for one group would be coextensive and prior art applicable to one invention would likely be applicable to the other invention(s). This is not found persuasive because the groups of inventions are not related to a single inventive concept and thus lack unity and therefore do not relate to a coextensive search in which one piece of prior art must be related to multiple Groups.

Claims 76-82 have been withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim.

The requirement is still deemed proper and is therefore made FINAL.

***Specification***

The disclosure is objected to because of the following informalities: Applicant has provided drawings in the specification, but a titled section describing the drawings is not found in the specification. The guidelines for the content of the specification include Brief Description of the Several Views of the Drawing(s): See MPEP § 608.01(f). A reference to and brief description of the drawing(s) as set forth in 37 CFR 1.74.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 51-53, 58, 59, 61, 63, and 65-68 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 51 recites, "wherein the unsaturated emulsifier comprises unsaturated glycerides, such as unsaturated monoglycerides, diglycerides or mixtures thereof." The term "such as" is unclear; it is unclear as to if the term is merely demonstrating possible embodiments of the unsaturated glycerides or if the term is limited the unsaturated glycerides to the listed set.

Claim 52 recites, "at least 50%, such as at least 60%, such as at least 80%, such as at least 90%, and such as 100%". The term "such as" is unclear; it is unclear as to if the term is merely demonstrating possible embodiments of the percentage claimed or if the term is limited the percentage to 100%. Furthermore, if the claim does indeed further limit the percentage, the claim would be further unclear for the recitation of a broad limitation followed by a narrow range/limitation. A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. See MPEP § 2173.05(c). Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949).

Claims 53, 58, 59, 61, 63, 65-67 also recite the term "such as" and a broad range followed by a more narrow range and thus are rejected for similar reasons as claim 52.

Claim 68 recites "hydrolyzed lactose preparation". While the term "hydrolyzed lactose" is clear and defined, it is unclear as to what the "preparation" of hydrolyzed lactose is; for example, it is unclear if the term "hydrolyzed lactose preparation" means ingredients in the preparation of the hydrolyzed lactose, such as non-fat solids (from which hydrolyzed lactose can be formed) and/or enzymes (which active hydrolysis of

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the lactose), or if the term means hydrolyzed lactose, or if the term has some other meaning.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 45, 51-53, 57-65, 71, and 73-75 are rejected under 35 U.S.C. 102(b) as being anticipated by Vaghela et al (US 6,596,333 B1).

Vaghela et al (Vaghela) teaches forming a stable frozen confections including ice cream by freezing an ice cream mix comprising ice cream ingredients and an emulsifier mixture (abstract and Column 1 line 59 through Column 2 line 6). Vaghela teaches that the ice cream mix comprises 0.01-3% of an emulsifier blend, preferably including about 0.01-0.2% unsaturated monoglycerides, about up to 100% by weight of the emulsifier blend (Column 4 lines 32-44 and Column 4 line 60 through Column 5 line 21), about 10-15% sugar including sucrose, lactose, and dextrose (Column 3 lines 33-44 and 53-55), about 0.5-15% fat comprising dairy fat or non-dairy fat or a mixture of both, wherein the non-dairy fat comprises vegetable oil including coconut oil, palm kernel oil, and combinations thereof (Column 3 lines 34-52), about 6-15% nonfat milk solids (Column 3 lines 33-44), about 0.1-1% stabilizers including guar gum, locust bean gum, and carrageenan (Column 3 lines 33-44 and Column 5 lines 22-26). As Vaghela teaches about 0.2% unsaturated emulsifier and the term "about" means near or close to, the references anticipates the instantly claimed range of "at least 2% unsaturated emulsifier". In example 1, Vaghela exemplifies that the fat consist of 100% vegetable oil. In example 3, Table I, Vaghela teaches that the composition includes 0.15% guar gum and 0.2% carrageenan. Vaghela teaches that the frozen product is packaged into bulk containers, extruded into bars or cones, or packed into small containers (Column 6 lines 20-24). Regarding the freezing point of the ice cream mix as -3.5C or lower as recited

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in claims 45 and 71, -4C or lower as recited in claim 74, or -4.5C as recited in claim 75, as Vaghela teaches of a composition with substantially the same composition, one of ordinary skill in the art would expect that the composition of Vaghela have substantially the same properties, including freezing point, as the instantly claimed invention, absent any clear and convincing arguments and/or evidence to the contrary. This position is further supported as Vaghela teaches that the confection requires freezing depending on the freezing point of the mix and that freezing is typically conducted at preferably about -5C to -6C (Column 6 lines 12-19), which is lower than -3.5C, -4C, and -4.5c as instantly claimed.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 46-50 and 72 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vaghela et al (US 6,596,333 B1) in view of Grey et al (US 6,497,913 B1).

Vaghela teaches forming a stable ice cream from an ice cream mix preferably comprising about 0.2% unsaturated monoglyceride emulsifiers as discussed above. Vaghela is silent to the unsaturated emulsifier, monoglycerides as at least 0.25% as recited in claims 46 and 72 or at least 0.3% as recited in claim 47 and at most 1% as recited in claim 48 or 0.75% as recited in claim 49 or 0.5% as recited in claim 50.

Grey et al (Grey) teaches that reduced gas cell sizes in frozen confections enhances the creaminess of the final product (Column 1 lines 36-54). Grey teaches that preferably the use of an unsaturated emulsifier monoglyceride at about 0.67%-5%, preferably about 1.25-2.5% of the fat level of the confection allows for the production of ice cream with smaller gas cells (Column 6 lines 13-25). Grey teaches that the fat in the ice cream mix is from 2-15% (Column 5 lines 54-61) and thus the amount of

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unsaturated emulsifier in the mix is from about 0.01-0.75%, preferably from 0.25-0.375%.

Regarding the unsaturated emulsifier as at least 0.25% as recited in claims 46 and 72 or at least 0.3% as recited in claim 47 and at most 1% as recited in claim 48 or 0.75% as recited in claim 49 or 0.5% as recited in claim 50, it would have been obvious to one of ordinary skill in the art to increase the amount of unsaturated emulsifier in the ice cream as taught by Vaghela to about 0.01-0.75%, preferably 0.25-0.375% of the ice cream mix in view of Grey. One would have been motivated to do so in order to form a final product with enhanced creaminess as taught by Grey. Furthermore, as Grey teaches that the emulsifier is included at a rate based upon the amount of fat in the confection, It would have been obvious to vary the range of the unsaturated emulsifier within the range of about 0.01-0.75% depending on the fat content of the confectionary product produced.

Claims 54 and 56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vaghela et al (US 6,596,333 B1) in view of Applicant's Admitted Prior Art.

Vaghela teaches forming a stable ice cream from an ice cream mix with a freezing point of preferably -5C to -6C and comprising 10-15% sugar including sucrose, as discussed above. Vaghela is silent to the sugar as being selected to achieve a freezing point of the ice cream mix of -3.5C or lower.

Applicant admits, Specification, page 2 line 29 through page 3 line 8, that ice cream having fewer and/or smaller ice crystals was known to have improved taste and that in order to obtain ice cream with such a quality, it has been attempted in the art to lower the freezing point of the mix to -3.5C or lower by altering the sugar.

Regarding the sugar as being selected to achieve a freezing point of the ice cream mix of -3.5C or lower, it would have been obvious to one of ordinary skill in the art to ensure that the freezing point of the ice cream mix taught by Vaghela was lower than -3.5C by adjusting the sugar content, in order to ensure that the final product had an improved taste, as was known to do in the art, as admitted by applicant.

Claims 55 is rejected under 35 U.S.C. 103(a) as being unpatentable over Vaghela et al (US 6,596,333 B1) in view of Applicant's Admitted Prior Art, further in view of Martin, Jr. et al (US 6,352, 734 B1).

Vaghela teaches forming a stable ice cream from an ice cream mix comprising about 3-8% sweetener comprising corn sweeteners including corn syrup solids and about 10-15% sugar including sucrose and dextrose (Column 4 lines 32-44 and 53-67), as discussed above. Vaghela is silent to sugar as comprising at least 50% monosaccharides as recited in claim 55.

Martin Jr. et al (Martin) teaches of frozen dairy products having surprising stability, organoleptic, and body characteristics (Column 1 lines 5-10). Martin teaches that the products have desirable texture with unique organoleptic properties (Column 3 lines 37-41). Martin teaches that sweetener composition preferably includes a combination of 2-8% corn syrup and the sugars comprising 5-10% sucrose and 4-12% dextrose to provide the desired level of sweetness and texture to the frozen product and to decrease the freezing point of the mixture to allow for uniform and stable incorporation of air (Column 5 lines 3-17 and 30-43).

Regarding the sugar component as at least 50% monosaccharides, it would have been obvious to one of ordinary skill in the art to use the sweetener composition of Martin, including 2-8% corn syrup, 5-10% sucrose, and 4-12% dextrose in the frozen confection of Vaghela. One would have been motivated to use the sweetener composition of Martin in order to form a final product with a desirable sweetness, texture, and which was able to allow for uniform and stable air incorporation. The combined references thus teach an ice cream composition comprising about 3-8% corn syrup as a sweetener and about 10-15% sugars comprised of a combination of 5-10% sucrose and 4-12% dextrose. Thus teaching that the sugar ingredient comprises about 33% monosaccharides (10% sucrose which is a disaccharide and 5% dextrose which is a monosaccharide) up to about 66% monosaccharides (5% sucrose which is a disaccharide and 10% dextrose which is a monosaccharide), which encompasses the instantly claimed range. As dextrose was less sweet than sucrose, it would have been further obvious to one of ordinary skill in the art to use the combination with the greater



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amount of dextrose and thus monosaccharides to obtain a less sweet composition. To alter the sweetness in the final product within known ranges would have been obvious and routine determination to one of ordinary skill in the art.

Claim 66 is rejected under 35 U.S.C. 103(a) as being unpatentable over Vaghela et al (US 6,596,333 B1) in view of Igoe et al (Dictionary of Food Ingredients 3<sup>rd</sup> Edition, page 84).

Vaghela teaches forming a stable ice cream from an ice cream mix comprising stabilizers including locust bean gum. Vaghela does not teach how much of the stabilizer locust bean gum is included in the ice cream mix.

Igoe et al (Igoe), page 84, teaches that locust bean gum provides high viscosity and functions as a water binder. Igoe, page 84, teaches that locust bean gum is included in ice creams and is typically used at levels of 0.1-1%.

Regarding the amount of amount of locust bean gum in the ice cream composition, it would have been obvious to one of ordinary skill in the art for the stabilizer including locust bean gum to be 0.1-1% locust bean gum in order to form a final product that was firm as a result of a high viscosity and bound water from the locust bean gum as taught by Igoe. To vary the amount of known stabilizers within their known composition range and based upon their known function would have been obvious and routine determination to one of ordinary skill in the art.

Claim 68 is rejected under 35 U.S.C. 103(a) as being unpatentable over Vaghela et al (US 6,596,333 B1) in view of the combination of Martin, Jr. et al (US 6,352, 734 B1) and Stimpson et al (US 2,738,279), as evidenced by Arbuckle, Ice Cream 2<sup>nd</sup> Edition page 37.

Vaghela teaches forming a stable ice cream from an ice cream mix comprising about 6-15% nonfat milk solids, about 3-8% sweetener comprising corn sweeteners including corn syrup solids and about 10-15% sugar including sucrose and dextrose (Column 4 lines 32-44 and 53-67), as discussed above. Vaghela is silent to the

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composition as specifically comprising 5-10% hydrolyzed lactose preparation, 2-8% sucrose, and 10-22% dextrose as recited in claim 68.

Martin Jr. et al (Martin) teaches of frozen dairy products having surprising stability, organoleptic, and body characteristics (Column 1 lines 5-10). Martin teaches that the products have desirable texture with unique organoleptic properties (Column 3 lines 37-41). Martin teaches that sweetener composition preferably includes a combination of 2-8% corn syrup and the sugars comprising 5-10% sucrose and 4-12% dextrose to provide the desired level of sweetness and texture to the frozen product and to decrease the freezing point of the mixture to allow for uniform and stable incorporation of air (Column 5 lines 3-17 and 30-43).

Stimpson et al (Stimpson) teaches that the milk solids in ice cream is usually in the order of 9-11% and that at levels above 11% the lactose content gives rise to serious problems in ice cream storage. Stimpson teaches that the lactose is supersaturated and has a tendency to crystallize giving rise to gritty conditions. Refer specifically to Column 1 lines 32-45. Stimpson teaches that if hydrolysis of the lactose occurs, the problem is overcome (Column 2 lines 5-28). Stimpson teaches that the final ice cream product has a nonfat milk solids content of 10-14%, wherein the milk solids wherein at least 40% of the lactose has been hydrolyzed (Column 4 lines 15-31). Stimpson teaches that all of the lactose is hydrolyzed (Column 3 lines 10-15).

As evidenced by Arbuckle, page 37, nonfat milk solids contain about 55.5% lactose.

Regarding the composition as comprising 5-10% hydrolyzed lactose preparation, as stated above, it is unclear as to what hydrolyzed lactose "preparation" means. It would have been obvious to one of ordinary skill in the art to hydrolyze all of the lactose in the 6-15% nonfat skim milk solids as taught by Vaghela in view of Stimpson. One would have been motivated to do so in order for the final ice cream product to have less tendency to crystallize and form a gritty texture as taught by Stimpson. The product of Vaghela in view of Stimpson would thus contain 6-15% nonfat milk solids wherein all of the lactose is hydrolyzed. As evidence by Arbuckle nonfat milk solids contain about

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55.5% lactose, thus the product of Vaghela in view of Stimpson comprises about 3.3-8.3% hydrolyzed lactose and is believed to meet the instantly claimed limitations.

Regarding the composition as comprising 2-8% sucrose and 10-22% dextrose, it would have been obvious to one of ordinary skill in the art to use the sweetener composition of Martin, including 2-8% corn syrup, 5-10% sucrose, and 4-12% dextrose in the frozen confection of Vaghela. One would have been motivated to use the sweetener composition of Martin in order to form a final product with a desirable sweetness, texture, and which was able to allow for uniform and stable air incorporation. The combined references thus teach an ice cream composition comprising about 3-8% corn syrup as a sweetener and about 10-15% sugars comprised of a combination of 5-10% sucrose and 4-12% dextrose. As dextrose was less sweet than sucrose, it would have been further obvious to one of ordinary skill in the art to use the combination with the greater amount of dextrose to obtain a less sweet composition. To alter the sweetness in the final product within known ranges would have been obvious and routine determination to one of ordinary skill in the art.

Claims 69 is rejected under 35 U.S.C. 103(a) as being unpatentable over Vaghela et al (US 6,596,333 B1) in view of D'Amato (US 5,586,689).

Vaghela teaches forming a stable ice cream which is packaged, as discussed above. Vaghela is silent to the type of package that is utilized for the ice cream, specifically to the package as a squeezable container as recited in claim 69.

D'Amato teaches a squeezable container especially for ice cream, wherein the container does not leak and allows the consumer to eat the ice cream by hand (abstract and Column 1 lines 15-25).

Regarding the ice cream package as a squeezable container, it would have been obvious to one of ordinary skill in the art at the time the invention was made for the ice cream package of Vaghela to be a squeezable container in view of D'Amato. One would have been motivated to use the squeezable container of D'Amato for the ice cream in order to form a final product which did not leak and was a single serving that could be eaten by the consumer without utensils, and thus on the run.

Claims 70 is rejected under 35 U.S.C. 103(a) as being unpatentable over Vaghela et al (US 6,596,333 B1) in view of Riviere et al (US 6,558,729 B1).

Vaghela teaches forming a stable ice cream which is packaged, as discussed above. Vaghela is silent to the type of package that is utilized for the ice cream, specifically to the package as an aerosol as recited in claim 70.

Riviere et al (Riviere) teaches of frozen desserts which are packageable in aerosol containers, i.e. pressured containers that contain a gas or propellant (abstract, Column 2 lines 45-53 and Column 6 lines 32-39).

Regarding the ice cream as packaged in an aerosol container, it would have been obvious to one of ordinary skill in the art to package the ice cream as taught by Vaghela in an aerosol container in view of Riviere. One would have been motivated to do so in order for final product which would be easily removed (with the aerosol assistance) from the container for serving.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KELLY BEKKER whose telephone number is (571)272-2739. The examiner can normally be reached on Monday through Friday 8am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Keith Hendricks can be reached on (571) 272-1401. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Lien Tran/  
Primary Examiner  
Art Unit 1794

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